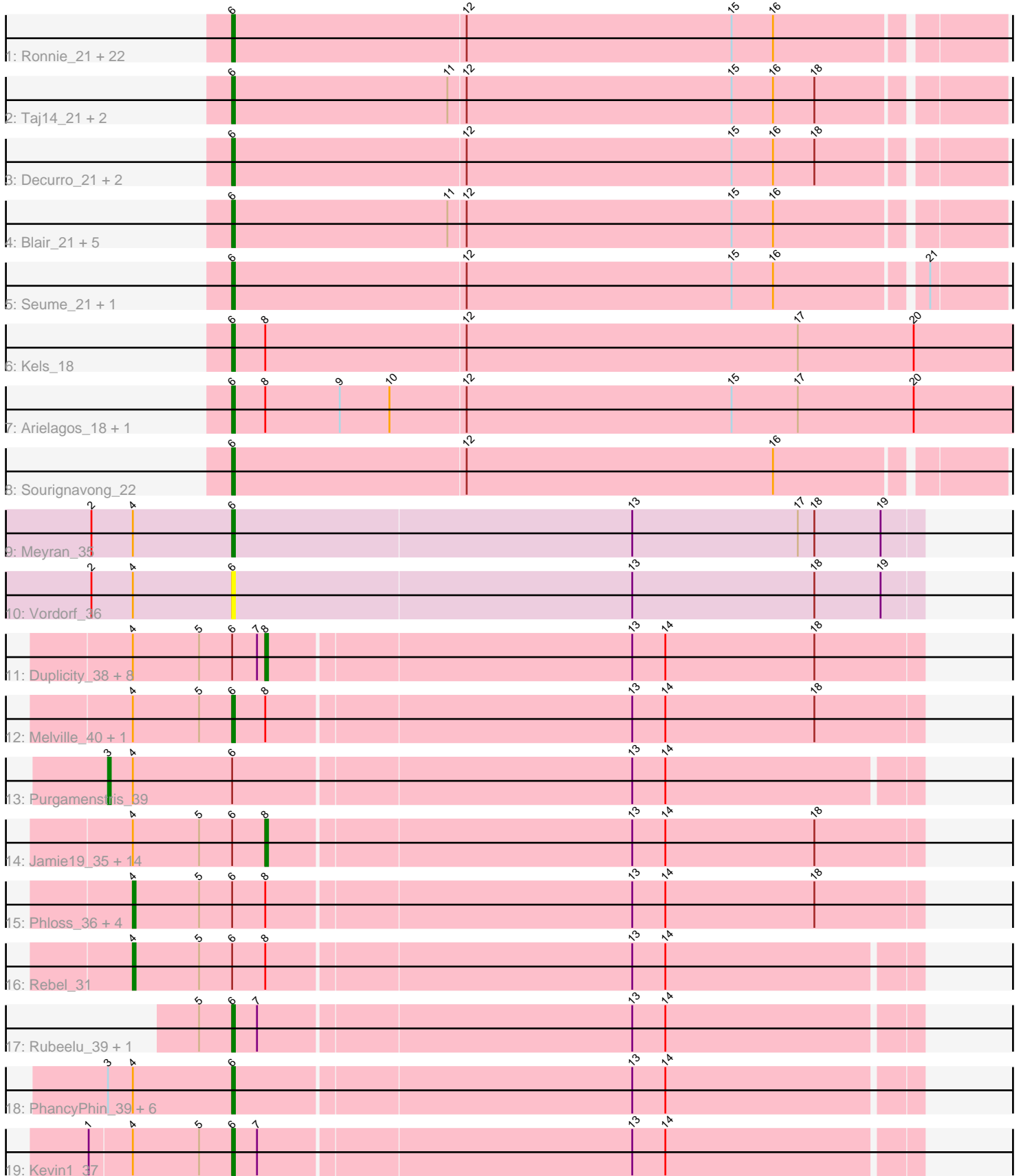


Pham 193924



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 193924 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193924 has 86 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Ronnie_21, Inspire2_21, Guntur_21, Sandman_27, Courtney3_21, Azathoth_21, CGermain_21, Stratus_21, Massimo_21, Maggie_21, Copper_21, LouisXIV_21, Moloch_21, Arby_21, TymAbreu_21, Chestnut_26, Dewayne_21, Prospero_21, Muttie_21, TinoCrisci_21, Jessica_22, Mariposa_21, Hunnie_21
- Track 2 : Taj14_21, Saphira_22, Swenson_21
- Track 3 : Decurro_21, Link_21, Yank_21
- Track 4 : Blair_21, KylieMac_22, Laila_23, Elkhorn_21, Lore_21, StewieGriff_21
- Track 5 : Seume_21, Toulouse_20
- Track 6 : Kels_18
- Track 7 : Arielagos_18, SerialPhiller_18
- Track 8 : Sourignavong_22
- Track 9 : Meyran_35
- Track 10 : Vordorf_36
- Track 11 : Duplicity_38, Tapioca_39, Silvy_36, Charlie_36, Gex_38, Journey_36, Aggie_36, Scitech_35, Xeno_35
- Track 12 : Melville_40, Shweta_35
- Track 13 : Purgamenstris_39
- Track 14 : Jamie19_35, Phrann_39, Silvafighter_39, Parmesanjohn_38, Panchino_34, Smurph_38, Magsby_38, SpongeBob_35, MichelleMyBell_36, Pipsqueaks_38, SkinnyPete_33, Fulbright_37, Xerxes_38, Bosection6_38, Snekmaggedon_35
- Track 15 : Phloss_36, Andies_35, Chewbacca_39, Schnauzer_38, Carcharodon_38
- Track 16 : Rebel_31
- Track 17 : Rubeelu_39, Butters_39
- Track 18 : PhancyPhin_39, Hanako_40, Nenae_39, BabeRuth_40, Redi_39, Raymond7_33, ShrimpFriedEgg_39
- Track 19 : Kevin1_37

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 6, it was called in 53 of the 82 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arby_21, Arielagos_18, Azathoth_21, BabeRuth_40, Blair_21, Butters_39, CGermain_21, Chestnut_26, Copper_21, Courtney3_21, Decurro_21, Dewayne_21, Elkhorn_21, Guntur_21, Hanako_40, Hunnie_21, Inspire2_21, Jessica_22, Kels_18, Kevin1_37, KylieMac_22, Laila_23, Link_21, Lore_21, LouisXIV_21, Maggie_21, Mariposa_21, Massimo_21, Melville_40, Meyran_35, Moloch_21, Muttie_21, Nenae_39, PhancyPhin_39, Prospero_21, Raymond7_33, Redi_39, Ronnie_21, Rubeelu_39, Sandman_27, Saphira_22, SerialPhiller_18, Seume_21, ShrimpFriedEgg_39, Shweta_35, Sourignavong_22, StewieGriff_21, Stratus_21, Swenson_21, Taj14_21, TinoCrisci_21, Toulouse_20, TymAbreu_21, Vordorf_36, Yank_21,

Genes that have the "Most Annotated" start but do not call it:

- Aggie_36, Andies_35, Bosection6_38, Carcharodon_38, Charlie_36, Chewbacca_39, Duplicity_38, Fulbright_37, Gex_38, Jamie19_35, Journey_36, Magsby_38, MichelleMyBell_36, Panchino_34, Parmesanjohn_38, Phloss_36, Phrann_39, Pipsqueaks_38, Purgamenstris_39, Rebel_31, Schnauzer_38, Scitech_35, Silvafighter_39, Silvy_36, SkinnyPete_33, Smurph_38, Snekmaggon_35, SpongeBob_35, Tapioca_39, Xeno_35, Xerxes_38,

Genes that do not have the "Most Annotated" start:

-

Summary by start number:

Start 3:

- Found in 8 of 86 (9.3%) of genes in pham
- Manual Annotations of this start: 1 of 82
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Purgamenstris_39 (N),

Start 4:

- Found in 43 of 86 (50.0%) of genes in pham
- Manual Annotations of this start: 6 of 82
- Called 14.0% of time when present
- Phage (with cluster) where this start called: Andies_35 (N), Carcharodon_38 (N), Chewbacca_39 (N), Phloss_36 (N), Rebel_31 (N), Schnauzer_38 (N),

Start 6:

- Found in 86 of 86 (100.0%) of genes in pham
- Manual Annotations of this start: 53 of 82
- Called 64.0% of time when present
- Phage (with cluster) where this start called: Arby_21 (AN), Arielagos_18 (AN), Azathoth_21 (AN), BabeRuth_40 (N), Blair_21 (AN), Butters_39 (N), CGermain_21 (AN), Chestnut_26 (AN), Copper_21 (AN), Courtney3_21 (AN), Decurro_21 (AN), Dewayne_21 (AN), Elkhorn_21 (AN), Guntur_21 (AN), Hanako_40 (N), Hunnie_21 (AN), Inspire2_21 (AN), Jessica_22 (AN), Kels_18 (AN), Kevin1_37 (N), KylieMac_22 (AN), Laila_23 (AN), Link_21 (AN), Lore_21 (AN), LouisXIV_21 (AN), Maggie_21 (AN), Mariposa_21 (AN), Massimo_21 (AN), Melville_40 (N), Meyran_35 (DT), Moloch_21 (AN), Muttie_21 (AN), Nenae_39 (N), PhancyPhin_39 (N), Prospero_21 (AN), Raymond7_33 (N), Redi_39 (N), Ronnie_21 (AN), Rubeelu_39 (N), Sandman_27 (AN), Saphira_22 (AN), SerialPhiller_18 (AN), Seume_21 (AN), ShrimpFriedEgg_39 (N), Shweta_35 (N), Sourignavong_22 (AN), StewieGriff_21 (AN), Stratus_21 (AN), Swenson_21 (AN), Taj14_21 (AN), TinoCrisci_21 (AN),

Toulouse_20 (AN), TymAbreu_21 (AN), Vordorf_36 (DT), Yank_21 (AN),

Start 8:

- Found in 35 of 86 (40.7%) of genes in pham
- Manual Annotations of this start: 22 of 82
- Called 68.6% of time when present
- Phage (with cluster) where this start called: Aggie_36 (N), Bosection6_38 (N), Charlie_36 (N), Duplicity_38 (N), Fulbright_37 (N), Gex_38 (N), Jamie19_35 (N), Journey_36 (N), Magsby_38 (N), MichelleMyBell_36 (N), Panchino_34 (N), Parmesanjohn_38 (N), Phrann_39 (N), Pipsqueaks_38 (N), Scitech_35 (N), Silvafighter_39 (N), Silvy_36 (N), SkinnyPete_33 (N), Smurph_38 (N), Snekmaggedon_35 (N), SpongeBob_35 (N), Tapioca_39 (N), Xeno_35 (N), Xerxes_38 (N),

Summary by clusters:

There are 3 clusters represented in this pham: DT, AN, N,

Info for manual annotations of cluster AN:

- Start number 6 was manually annotated 41 times for cluster AN.

Info for manual annotations of cluster DT:

- Start number 6 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster N:

- Start number 3 was manually annotated 1 time for cluster N.
- Start number 4 was manually annotated 6 times for cluster N.
- Start number 6 was manually annotated 11 times for cluster N.
- Start number 8 was manually annotated 22 times for cluster N.

Gene Information:

Gene: Aggie_36 Start: 27900, Stop: 28133, Start Num: 8

Candidate Starts for Aggie_36:

(Start: 4 @27852 has 6 MA's), (5, 27876), (Start: 6 @27888 has 53 MA's), (7, 27897), (Start: 8 @27900 has 22 MA's), (13, 28029), (14, 28041), (18, 28095),

Gene: Andies_35 Start: 28370, Stop: 28651, Start Num: 4

Candidate Starts for Andies_35:

(Start: 4 @28370 has 6 MA's), (5, 28394), (Start: 6 @28406 has 53 MA's), (Start: 8 @28418 has 22 MA's), (13, 28547), (14, 28559), (18, 28613),

Gene: Arby_21 Start: 13776, Stop: 13504, Start Num: 6

Candidate Starts for Arby_21:

(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Arielagos_18 Start: 12965, Stop: 12678, Start Num: 6

Candidate Starts for Arielagos_18:

(Start: 6 @12965 has 53 MA's), (Start: 8 @12953 has 22 MA's), (9, 12926), (10, 12908), (12, 12881), (15, 12785), (17, 12761), (20, 12719),

Gene: Azathoth_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Azathoth_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: BabeRuth_40 Start: 29534, Stop: 29776, Start Num: 6
Candidate Starts for BabeRuth_40:
(Start: 3 @29489 has 1 MA's), (Start: 4 @29498 has 6 MA's), (Start: 6 @29534 has 53 MA's), (13, 29675), (14, 29687),

Gene: Blair_21 Start: 13773, Stop: 13501, Start Num: 6
Candidate Starts for Blair_21:
(Start: 6 @13773 has 53 MA's), (11, 13695), (12, 13689), (15, 13593), (16, 13578),

Gene: Bosection6_38 Start: 27921, Stop: 28154, Start Num: 8
Candidate Starts for Bosection6_38:
(Start: 4 @27873 has 6 MA's), (5, 27897), (Start: 6 @27909 has 53 MA's), (Start: 8 @27921 has 22 MA's), (13, 28050), (14, 28062), (18, 28116),

Gene: Butters_39 Start: 29960, Stop: 30202, Start Num: 6
Candidate Starts for Butters_39:
(5, 29948), (Start: 6 @29960 has 53 MA's), (7, 29969), (13, 30101), (14, 30113),

Gene: CGermain_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for CGermain_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Carcharodon_38 Start: 29181, Stop: 29462, Start Num: 4
Candidate Starts for Carcharodon_38:
(Start: 4 @29181 has 6 MA's), (5, 29205), (Start: 6 @29217 has 53 MA's), (Start: 8 @29229 has 22 MA's), (13, 29358), (14, 29370), (18, 29424),

Gene: Charlie_36 Start: 27920, Stop: 28153, Start Num: 8
Candidate Starts for Charlie_36:
(Start: 4 @27872 has 6 MA's), (5, 27896), (Start: 6 @27908 has 53 MA's), (7, 27917), (Start: 8 @27920 has 22 MA's), (13, 28049), (14, 28061), (18, 28115),

Gene: Chestnut_26 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Chestnut_26:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Chewbacca_39 Start: 29181, Stop: 29462, Start Num: 4
Candidate Starts for Chewbacca_39:
(Start: 4 @29181 has 6 MA's), (5, 29205), (Start: 6 @29217 has 53 MA's), (Start: 8 @29229 has 22 MA's), (13, 29358), (14, 29370), (18, 29424),

Gene: Copper_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Copper_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Courtney3_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Courtney3_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Decurro_21 Start: 13744, Stop: 13472, Start Num: 6
Candidate Starts for Decurro_21:
(Start: 6 @13744 has 53 MA's), (12, 13660), (15, 13564), (16, 13549), (18, 13534),

Gene: Dewayne_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Dewayne_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Duplicity_38 Start: 29238, Stop: 29471, Start Num: 8
Candidate Starts for Duplicity_38:
(Start: 4 @29190 has 6 MA's), (5, 29214), (Start: 6 @29226 has 53 MA's), (7, 29235), (Start: 8 @29238 has 22 MA's), (13, 29367), (14, 29379), (18, 29433),

Gene: Elkhorn_21 Start: 13773, Stop: 13501, Start Num: 6
Candidate Starts for Elkhorn_21:
(Start: 6 @13773 has 53 MA's), (11, 13695), (12, 13689), (15, 13593), (16, 13578),

Gene: Fulbright_37 Start: 28318, Stop: 28551, Start Num: 8
Candidate Starts for Fulbright_37:
(Start: 4 @28270 has 6 MA's), (5, 28294), (Start: 6 @28306 has 53 MA's), (Start: 8 @28318 has 22 MA's), (13, 28447), (14, 28459), (18, 28513),

Gene: Gex_38 Start: 29245, Stop: 29478, Start Num: 8
Candidate Starts for Gex_38:
(Start: 4 @29197 has 6 MA's), (5, 29221), (Start: 6 @29233 has 53 MA's), (7, 29242), (Start: 8 @29245 has 22 MA's), (13, 29374), (14, 29386), (18, 29440),

Gene: Guntur_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Guntur_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Hanako_40 Start: 29533, Stop: 29775, Start Num: 6
Candidate Starts for Hanako_40:
(Start: 3 @29488 has 1 MA's), (Start: 4 @29497 has 6 MA's), (Start: 6 @29533 has 53 MA's), (13, 29674), (14, 29686),

Gene: Hunnie_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Hunnie_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Inspire2_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Inspire2_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Jamie19_35 Start: 28299, Stop: 28532, Start Num: 8
Candidate Starts for Jamie19_35:
(Start: 4 @28251 has 6 MA's), (5, 28275), (Start: 6 @28287 has 53 MA's), (Start: 8 @28299 has 22 MA's), (13, 28428), (14, 28440), (18, 28494),

Gene: Jessica_22 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Jessica_22:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Journey_36 Start: 27920, Stop: 28153, Start Num: 8
Candidate Starts for Journey_36:
(Start: 4 @27872 has 6 MA's), (5, 27896), (Start: 6 @27908 has 53 MA's), (7, 27917), (Start: 8 @27920 has 22 MA's), (13, 28049), (14, 28061), (18, 28115),

Gene: Kels_18 Start: 12902, Stop: 12615, Start Num: 6
Candidate Starts for Kels_18:
(Start: 6 @12902 has 53 MA's), (Start: 8 @12890 has 22 MA's), (12, 12818), (17, 12698), (20, 12656),

Gene: Kevin1_37 Start: 29139, Stop: 29381, Start Num: 6
Candidate Starts for Kevin1_37:
(1, 29088), (Start: 4 @29103 has 6 MA's), (5, 29127), (Start: 6 @29139 has 53 MA's), (7, 29148), (13, 29280), (14, 29292),

Gene: KylieMac_22 Start: 13760, Stop: 13488, Start Num: 6
Candidate Starts for KylieMac_22:
(Start: 6 @13760 has 53 MA's), (11, 13682), (12, 13676), (15, 13580), (16, 13565),

Gene: Laila_23 Start: 13773, Stop: 13501, Start Num: 6
Candidate Starts for Laila_23:
(Start: 6 @13773 has 53 MA's), (11, 13695), (12, 13689), (15, 13593), (16, 13578),

Gene: Link_21 Start: 13741, Stop: 13469, Start Num: 6
Candidate Starts for Link_21:
(Start: 6 @13741 has 53 MA's), (12, 13657), (15, 13561), (16, 13546), (18, 13531),

Gene: Lore_21 Start: 13773, Stop: 13501, Start Num: 6
Candidate Starts for Lore_21:
(Start: 6 @13773 has 53 MA's), (11, 13695), (12, 13689), (15, 13593), (16, 13578),

Gene: LouisXIV_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for LouisXIV_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Maggie_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Maggie_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Magsby_38 Start: 29246, Stop: 29479, Start Num: 8
Candidate Starts for Magsby_38:
(Start: 4 @29198 has 6 MA's), (5, 29222), (Start: 6 @29234 has 53 MA's), (Start: 8 @29246 has 22 MA's), (13, 29375), (14, 29387), (18, 29441),

Gene: Mariposa_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Mariposa_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Massimo_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Massimo_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Melville_40 Start: 29218, Stop: 29463, Start Num: 6
Candidate Starts for Melville_40:

(Start: 4 @29182 has 6 MA's), (5, 29206), (Start: 6 @29218 has 53 MA's), (Start: 8 @29230 has 22 MA's), (13, 29359), (14, 29371), (18, 29425),

Gene: Meyran_35 Start: 31028, Stop: 31276, Start Num: 6

Candidate Starts for Meyran_35:

(2, 30977), (Start: 4 @30992 has 6 MA's), (Start: 6 @31028 has 53 MA's), (13, 31172), (17, 31232), (18, 31238), (19, 31262),

Gene: MichelleMyBell_36 Start: 28237, Stop: 28470, Start Num: 8

Candidate Starts for MichelleMyBell_36:

(Start: 4 @28189 has 6 MA's), (5, 28213), (Start: 6 @28225 has 53 MA's), (Start: 8 @28237 has 22 MA's), (13, 28366), (14, 28378), (18, 28432),

Gene: Moloch_21 Start: 13850, Stop: 13578, Start Num: 6

Candidate Starts for Moloch_21:

(Start: 6 @13850 has 53 MA's), (12, 13766), (15, 13670), (16, 13655),

Gene: Muttlie_21 Start: 13744, Stop: 13472, Start Num: 6

Candidate Starts for Muttlie_21:

(Start: 6 @13744 has 53 MA's), (12, 13660), (15, 13564), (16, 13549),

Gene: Nenae_39 Start: 29536, Stop: 29778, Start Num: 6

Candidate Starts for Nenae_39:

(Start: 3 @29491 has 1 MA's), (Start: 4 @29500 has 6 MA's), (Start: 6 @29536 has 53 MA's), (13, 29677), (14, 29689),

Gene: Panchino_34 Start: 29645, Stop: 29878, Start Num: 8

Candidate Starts for Panchino_34:

(Start: 4 @29597 has 6 MA's), (5, 29621), (Start: 6 @29633 has 53 MA's), (Start: 8 @29645 has 22 MA's), (13, 29774), (14, 29786), (18, 29840),

Gene: Parmesanjohn_38 Start: 29249, Stop: 29482, Start Num: 8

Candidate Starts for Parmesanjohn_38:

(Start: 4 @29201 has 6 MA's), (5, 29225), (Start: 6 @29237 has 53 MA's), (Start: 8 @29249 has 22 MA's), (13, 29378), (14, 29390), (18, 29444),

Gene: PhancyPhin_39 Start: 29530, Stop: 29772, Start Num: 6

Candidate Starts for PhancyPhin_39:

(Start: 3 @29485 has 1 MA's), (Start: 4 @29494 has 6 MA's), (Start: 6 @29530 has 53 MA's), (13, 29671), (14, 29683),

Gene: Phloss_36 Start: 28608, Stop: 28889, Start Num: 4

Candidate Starts for Phloss_36:

(Start: 4 @28608 has 6 MA's), (5, 28632), (Start: 6 @28644 has 53 MA's), (Start: 8 @28656 has 22 MA's), (13, 28785), (14, 28797), (18, 28851),

Gene: Phrann_39 Start: 30325, Stop: 30558, Start Num: 8

Candidate Starts for Phrann_39:

(Start: 4 @30277 has 6 MA's), (5, 30301), (Start: 6 @30313 has 53 MA's), (Start: 8 @30325 has 22 MA's), (13, 30454), (14, 30466), (18, 30520),

Gene: Pipsqueaks_38 Start: 29226, Stop: 29459, Start Num: 8

Candidate Starts for Pipsqueaks_38:

(Start: 4 @29178 has 6 MA's), (5, 29202), (Start: 6 @29214 has 53 MA's), (Start: 8 @29226 has 22 MA's), (13, 29355), (14, 29367), (18, 29421),

Gene: Prospero_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Prospero_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Purgamenstris_39 Start: 29489, Stop: 29776, Start Num: 3
Candidate Starts for Purgamenstris_39:
(Start: 3 @29489 has 1 MA's), (Start: 4 @29498 has 6 MA's), (Start: 6 @29534 has 53 MA's), (13, 29675), (14, 29687),

Gene: Raymond7_33 Start: 29346, Stop: 29588, Start Num: 6
Candidate Starts for Raymond7_33:
(Start: 3 @29301 has 1 MA's), (Start: 4 @29310 has 6 MA's), (Start: 6 @29346 has 53 MA's), (13, 29487), (14, 29499),

Gene: Rebel_31 Start: 25628, Stop: 25906, Start Num: 4
Candidate Starts for Rebel_31:
(Start: 4 @25628 has 6 MA's), (5, 25652), (Start: 6 @25664 has 53 MA's), (Start: 8 @25676 has 22 MA's), (13, 25805), (14, 25817),

Gene: Redi_39 Start: 29533, Stop: 29775, Start Num: 6
Candidate Starts for Redi_39:
(Start: 3 @29488 has 1 MA's), (Start: 4 @29497 has 6 MA's), (Start: 6 @29533 has 53 MA's), (13, 29674), (14, 29686),

Gene: Ronnie_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for Ronnie_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Rubeelu_39 Start: 29960, Stop: 30202, Start Num: 6
Candidate Starts for Rubeelu_39:
(5, 29948), (Start: 6 @29960 has 53 MA's), (7, 29969), (13, 30101), (14, 30113),

Gene: Sandman_27 Start: 13850, Stop: 13578, Start Num: 6
Candidate Starts for Sandman_27:
(Start: 6 @13850 has 53 MA's), (12, 13766), (15, 13670), (16, 13655),

Gene: Saphira_22 Start: 13775, Stop: 13503, Start Num: 6
Candidate Starts for Saphira_22:
(Start: 6 @13775 has 53 MA's), (11, 13697), (12, 13691), (15, 13595), (16, 13580), (18, 13565),

Gene: Schnauzer_38 Start: 29201, Stop: 29482, Start Num: 4
Candidate Starts for Schnauzer_38:
(Start: 4 @29201 has 6 MA's), (5, 29225), (Start: 6 @29237 has 53 MA's), (Start: 8 @29249 has 22 MA's), (13, 29378), (14, 29390), (18, 29444),

Gene: Scitech_35 Start: 27097, Stop: 27330, Start Num: 8
Candidate Starts for Scitech_35:
(Start: 4 @27049 has 6 MA's), (5, 27073), (Start: 6 @27085 has 53 MA's), (7, 27094), (Start: 8 @27097 has 22 MA's), (13, 27226), (14, 27238), (18, 27292),

Gene: SerialPhiller_18 Start: 12965, Stop: 12678, Start Num: 6
Candidate Starts for SerialPhiller_18:
(Start: 6 @12965 has 53 MA's), (Start: 8 @12953 has 22 MA's), (9, 12926), (10, 12908), (12, 12881),
(15, 12785), (17, 12761), (20, 12719),

Gene: Seume_21 Start: 13539, Stop: 13267, Start Num: 6
Candidate Starts for Seume_21:
(Start: 6 @13539 has 53 MA's), (12, 13455), (15, 13359), (16, 13344), (21, 13293),

Gene: ShrimpFriedEgg_39 Start: 29533, Stop: 29775, Start Num: 6
Candidate Starts for ShrimpFriedEgg_39:
(Start: 3 @29488 has 1 MA's), (Start: 4 @29497 has 6 MA's), (Start: 6 @29533 has 53 MA's), (13,
29674), (14, 29686),

Gene: Shweta_35 Start: 28417, Stop: 28662, Start Num: 6
Candidate Starts for Shweta_35:
(Start: 4 @28381 has 6 MA's), (5, 28405), (Start: 6 @28417 has 53 MA's), (Start: 8 @28429 has 22
MA's), (13, 28558), (14, 28570), (18, 28624),

Gene: Silvafighter_39 Start: 29222, Stop: 29455, Start Num: 8
Candidate Starts for Silvafighter_39:
(Start: 4 @29174 has 6 MA's), (5, 29198), (Start: 6 @29210 has 53 MA's), (Start: 8 @29222 has 22
MA's), (13, 29351), (14, 29363), (18, 29417),

Gene: Silvy_36 Start: 27900, Stop: 28133, Start Num: 8
Candidate Starts for Silvy_36:
(Start: 4 @27852 has 6 MA's), (5, 27876), (Start: 6 @27888 has 53 MA's), (7, 27897), (Start: 8
@27900 has 22 MA's), (13, 28029), (14, 28041), (18, 28095),

Gene: SkinnyPete_33 Start: 26960, Stop: 27193, Start Num: 8
Candidate Starts for SkinnyPete_33:
(Start: 4 @26912 has 6 MA's), (5, 26936), (Start: 6 @26948 has 53 MA's), (Start: 8 @26960 has 22
MA's), (13, 27089), (14, 27101), (18, 27155),

Gene: Smurph_38 Start: 29249, Stop: 29482, Start Num: 8
Candidate Starts for Smurph_38:
(Start: 4 @29201 has 6 MA's), (5, 29225), (Start: 6 @29237 has 53 MA's), (Start: 8 @29249 has 22
MA's), (13, 29378), (14, 29390), (18, 29444),

Gene: Snekmaggedon_35 Start: 28299, Stop: 28532, Start Num: 8
Candidate Starts for Snekmaggedon_35:
(Start: 4 @28251 has 6 MA's), (5, 28275), (Start: 6 @28287 has 53 MA's), (Start: 8 @28299 has 22
MA's), (13, 28428), (14, 28440), (18, 28494),

Gene: Sourignavong_22 Start: 13845, Stop: 13573, Start Num: 6
Candidate Starts for Sourignavong_22:
(Start: 6 @13845 has 53 MA's), (12, 13761), (16, 13650),

Gene: SpongeBob_35 Start: 28299, Stop: 28532, Start Num: 8
Candidate Starts for SpongeBob_35:
(Start: 4 @28251 has 6 MA's), (5, 28275), (Start: 6 @28287 has 53 MA's), (Start: 8 @28299 has 22
MA's), (13, 28428), (14, 28440), (18, 28494),

Gene: StewieGriff_21 Start: 13773, Stop: 13501, Start Num: 6
Candidate Starts for StewieGriff_21:
(Start: 6 @13773 has 53 MA's), (11, 13695), (12, 13689), (15, 13593), (16, 13578),

Gene: Stratus_21 Start: 13850, Stop: 13578, Start Num: 6
Candidate Starts for Stratus_21:
(Start: 6 @13850 has 53 MA's), (12, 13766), (15, 13670), (16, 13655),

Gene: Swenson_21 Start: 13897, Stop: 13625, Start Num: 6
Candidate Starts for Swenson_21:
(Start: 6 @13897 has 53 MA's), (11, 13819), (12, 13813), (15, 13717), (16, 13702), (18, 13687),

Gene: Taj14_21 Start: 13772, Stop: 13500, Start Num: 6
Candidate Starts for Taj14_21:
(Start: 6 @13772 has 53 MA's), (11, 13694), (12, 13688), (15, 13592), (16, 13577), (18, 13562),

Gene: Tapioca_39 Start: 29215, Stop: 29448, Start Num: 8
Candidate Starts for Tapioca_39:
(Start: 4 @29167 has 6 MA's), (5, 29191), (Start: 6 @29203 has 53 MA's), (7, 29212), (Start: 8 @29215 has 22 MA's), (13, 29344), (14, 29356), (18, 29410),

Gene: TinoCrisci_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for TinoCrisci_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Toulouse_20 Start: 13539, Stop: 13267, Start Num: 6
Candidate Starts for Toulouse_20:
(Start: 6 @13539 has 53 MA's), (12, 13455), (15, 13359), (16, 13344), (21, 13293),

Gene: TymAbreu_21 Start: 13776, Stop: 13504, Start Num: 6
Candidate Starts for TymAbreu_21:
(Start: 6 @13776 has 53 MA's), (12, 13692), (15, 13596), (16, 13581),

Gene: Vordorf_36 Start: 30303, Stop: 30551, Start Num: 6
Candidate Starts for Vordorf_36:
(2, 30252), (Start: 4 @30267 has 6 MA's), (Start: 6 @30303 has 53 MA's), (13, 30447), (18, 30513), (19, 30537),

Gene: Xeno_35 Start: 27686, Stop: 27919, Start Num: 8
Candidate Starts for Xeno_35:
(Start: 4 @27638 has 6 MA's), (5, 27662), (Start: 6 @27674 has 53 MA's), (7, 27683), (Start: 8 @27686 has 22 MA's), (13, 27815), (14, 27827), (18, 27881),

Gene: Xerxes_38 Start: 29246, Stop: 29479, Start Num: 8
Candidate Starts for Xerxes_38:
(Start: 4 @29198 has 6 MA's), (5, 29222), (Start: 6 @29234 has 53 MA's), (Start: 8 @29246 has 22 MA's), (13, 29375), (14, 29387), (18, 29441),

Gene: Yank_21 Start: 13744, Stop: 13472, Start Num: 6
Candidate Starts for Yank_21:
(Start: 6 @13744 has 53 MA's), (12, 13660), (15, 13564), (16, 13549), (18, 13534),